FZU
Institute of Physics of the Czech Academy of Sciences

SEMINAR

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Meeting Room 117, Na Slovance 1999/2, Prague 8

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Superelastic NiTi wire: Surface modification by Twisting and LTSS (low temperature shape setting)

Surface(or sub-surface) modification aiming at improvement of fatigue performance is the pursuit in scientific and engineering world. Systematical information regarding the subsurface modification, such as determination of parameters (twisting and LTSS), tensile comparason of superelastic wires with/without modification, and the fatigue results, will be elaborated in this presentation. It could be concluded that the process of twisting and LTSS can concretely modify superelastic parameters of NiTi wires without significantly changing their mechanical properties; and the fatigue tests should be carried out in stress control (instead of strain control) in order to prevent „buckling“ for cycle numbers which are greater than 100.

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